What is claimed:

- 1. An animal cell which can be infected by influenza viruses and is adapted to growth in suspension, wherein said cell is of the cell line MDCK (ATCC CCL 34 MDCL (NBL-2)).
- The animal cell of claim 1, wherein said cell is of the cell line MDCK 33016 (DSM ACC 2219).
- 3. An animal cell which can be infected by influenza viruses and is adapted to growth in serum-free medium, wherein said cell is of the cell line MDCK (ATCC CCL 34 MDCK (CCL-2)).
- The animal cell of claim 3, wherein said cell is of the cell line MDCK 33016 (DSM ACC 2219).
 - 5. A process for the replication of influenza viruses in cell culture, which comprises:
- (i) proliferating cells of the cell line MDCK (ATCC CCL MDCK (NBL-2)) which can be infected by influenza viruses in serum-free medium;
 - (ii) infecting the cells with influenza viruses;
- (iii) shortly before infection, simultaneously with infection or shortly after infection, adding to the cell suspension a protease to cleave the precursor protein of hemagglutinin; and
- (iv) after a further culturing phase, isolating the influenza viruses replicated in the cells.

- 6. The process as claimed in claim 5, the culture of the cells taking place in the perfusion system.
- 7. The process as claimed in claim 5, the culture of the cells taking place in the batch process.
- 8. The process as claimed in claim 5, the pH of the culture medium in step (i) being in the range from 6.6 to 7.8.
- 9. The process as claimed in claim 8, the pH of the culture medium being in the range from 6.8 to 7.3.
- The process as claimed in claim 5, the infection with influenza viruses being carried out when the cell culture has achieved a cell density of about 8 to 25×10^5 cells/ml (batch process) or of about 5 to 20×10^6 cells/ml (perfusion process).
- 11. The process a claimed in claim 5, the infection of the cells with influenza viruses being carried out at an m.o.i. (multiplicity of infection) of about 0.001 to 10.
- 12. The process as claimed in claim 11, the infection being carried out at an m.o.i. of about 0.002 to 0.5.

- 13. The process as claimed in claim 5, the protease being a serine protease.
- 14. The process as claimed in claim 13, the serine protease being trypsin.
- 15. The process as claimed in claim 14, trypsin being added up to a final concentration in the culture medium of 1 to 200 μ g/ml.
- 16. The process as claimed in claim 15, the final concentration of trypsin in the culture medium being in the range from 5 to 50 μ g/ml.
 - 17. The process as claimed in claim 5, the infected cells being cultured for 2 to 10 days.
 - 18. The process as claimed in claim 17, the infected cells being cultured for 3 to 7 days.
 - 19. The process as claimed in claim 5, the infected cells being cultured at 30 °C to 36 °C.
- 20. The process as claimed in claim 19, the infected cells being cultured at 32 °C to 34 °C.
- 21. The process as claimed in claim 5, the harvesting and isolation of the replicated viruses being carried out 2 to 10 days after infection.
 - 22. The process as claimed in claim 21, the harvesting and isolation of the viruses being

carried out 3 to 7 days after infection.

- The process as claimed in claim 5, wherein the cells are of the cell line MDCK 33016(DSM ACC 2219).
 - 24. A process for the replication of influenza viruses in cell culture, which comprises:
- (i) proliferating cells of the cell line MDCK (ATCC CCL MDCK (NBL-2)) which can be infected by influenza viruses in suspension;
 - (ii) infecting the cells with influenza viruses;
- (iii) shortly before infection, simultaneously with infection or shortly after infection, adding to the cell suspension a protease to cleave the precursor protein of hemagglutinin; and
 - (iv) after a further culturing phase, isolating the influenza viruses replicated in the cells.
- 25. The process as claimed in claim 24, the culture of the cells taking place in the perfusion system.
- 26. The process as claimed in claim 24, the culture of the cells taking place in the batch process.
- 27. The process as claimed in claim 24, the pH of the culture medium in step (i) being in the range from 6.6 to 7.8.

- 28. The process as claimed in claim 27, the pH of the culture medium being in the range from 6.8 to 7.3.
- The process as claimed in claim 24, the infection with influenza viruses being carried out when the cell culture ha achieved a cell density of about 8 to 25×10^5 cells/ml (batch process) or of about 5 to 20×10^6 cells/ml (perfusion process).
- 30. The process as claimed in claim 22, the infection of the cells with influenza viruses being carried out at an m.o.i. (multiplicity of infection) of about 0.001 to 10.
- 31. The process as claimed in claim 30, the infection being carried out at an m.o.i. of about 0.002 to 0.5.
 - 32. The process as claimed in claim 24, the protease being a serine protease.
 - 33. The process as claimed in claim 32, the serine protease being trypsin.
- 34a The process as claimed in claim 33, trypsin being added up to a final concentration in the culture medium of 1 to 200μg/ml.
- 35. The process as claimed in claim 34, the final concentration of trypsin in the culture medium being in the range from 5 to 50 μ g/ml.

- 36. The process as claimed in claim 24, the infected cells being cultured for 2 to 10 days.
- 37. The process as claimed in claim 36, the infected cells being cultured for 3 to 7 days.
- 38. The process as claimed in claim 24, the infected cells being cultured at 30 $^{\circ}$ C to 36 $^{\circ}$ C.
- 39. The process as claimed in claim 38, the infected cells being cultured at 32 °C to 34 °C.
- 40. The process as claimed in claim 24, the harvesting and isolation of the replicated viruses being carried out 2 to 10 days after infection.
- 41. The process as claimed in claim 40, the harvesting and isolation of the viruses being carried out 3 to 7 days after infection.
- 42. The process as claimed in claim 24, wherein the cells are of the cell line MDCK 33016 (DSNFACC 2219).